



Using Constant Time Delay to Teach Banking Skills

What is the evidence base?

A *potential* level of evidence based on two acceptable quality single subject studies

With who was it implemented?

- Students with
 - Moderate intellectual disability (2 studies, n=7)
- Ages ranged from 14-20
- Males (n=2), Females (n=1)
 - Gender not specified (1 study, n=4)
- Ethnicity
 - None reported (n= 7)

What is the practice?

Constant time delay is a variation of time delay, a prompting procedure that uses variations in the time intervals between presentation of the natural stimulus and the response prompt. Time delay transfers stimulus control from a prompt to the natural stimulus by delaying the presentation of the prompt following the presentation of the natural stimulus. Constant time delay is implemented by presenting several trials using a 0-second delay between the presentation of the natural stimulus and the response prompt. The trials that follow the simultaneous prompt condition apply a fixed time delay (e.g., 3 seconds or 5 seconds; Cooper, Heron, & Heward, 2007).

In the studies used to establish the evidence base for using CTD to teach banking skills, CTD included using a:

- Three second constant time delay (Branham, Collins, Schuster, & Kleinert, 1999; McDonnell & Ferguson)

How has the practice been implemented?

- Three second time delay was used in combination with video modeling, community-based instruction, and simulation to teach
 - Cashing a check (Branham, Collins, Schuster, & Kleinert, 1999)
- Three second time delay was used to teach
 - Writing a check
 - Using an ATM (McDonnell & Ferguson, 1989)

Where is the best place to find out how to do this practice?

- Using CTD to teach banking
<http://nsttac.org/sites/default/files/assets/pdf/LessonPlanMcDonnellFergusonbanking.pdf>

Where has it been implemented?

- Self-contained classroom and community (1 study)
- Community bank (1 study)

How does this practice relate to Indicator 13?

- Indicator 13 Checklist Item #3: Teaching banking skills may reflect results of transition assessment information
- Indicator 13 Checklist Item # 4: Conducting bank transactions may be a transition service designated in an IEP that will enable a student to meet his or her postsecondary independent living goal(s)
- Indicator 13 Checklist Item #6: Teaching banking skills may be part of an IEP goal that supports a student's postsecondary independent living goal(s)

How does this practice relate to Common Core Standards?

- Understand ratio concepts and use ratio reasoning to solve problems (Ratios and Proportional Relationships, Grade 6)
 - Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations
- Comprehension and Collaboration (Speaking and Listening, Grade 8)
 - Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally
- Knowledge of Language (Language, Grade 8)
 - Use knowledge of language and its conventions when writing, speaking, reading, or listening

How does this practice relate to the State's Career Cluster Initiative: Essential Knowledge and Skills?

- Demonstrate mathematics knowledge and skills required to pursue the full range of post-secondary education and career opportunities (Academic Foundations)
 - Identify whole numbers, decimals, and fractions
 - Demonstrate use of relational expressions such as: equal to, not equal, greater than, less than, etc
 - Demonstrate knowledge of basic arithmetic operations such as: addition, subtraction, multiplication, and division

References used to establish this evidence base:

- Branham, R. S., Collins, B. C., Schuster, J. W., & Kleinert, H. (1999). Teaching community skills to students with moderate disabilities: Comparing combined techniques of classroom simulation, videotape modeling, and community-based instruction. *Education and Training in Mental Retardation and Developmental Disabilities, 34*, 170-181.
- McDonnell, J., & Ferguson, B. (1989). A comparison of time delay and decreasing prompt hierarchy strategies in teaching banking skills to students with moderate handicaps. *Journal of Applied Behavior Analysis, 22*, 85-91.